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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/044,616

01/11/2002

Robert L. Chamberlain

032674-145

9468

7590

04/06/2005

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EXAMINER

TALAPATRA, ANIKA F

ART UNIT

PAPER NUMBER

2631

DATE MAILED: 04/06/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/044,616

Applicant(s)

CHAMBERLAIN

Examiner

Anika Talapatra

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11 January 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☒ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-30 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 20-30 is/are allowed.
- 6) ☒ Claim(s) 1-2, 11 is/are rejected.
- 7) ☒ Claim(s) 3-10 and 12-19 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 11 January 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>6/26/2002</u> | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Information Disclosure Statement

1. The information disclosure statement (IDS) submitted on 1/11/2002 is in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement is being considered by the examiner.

Specification

2. The disclosure is objected to because of the following informalities: paragraph 48 refers to figure 15. Lines 4 and 6 of paragraph 48 state "LATCH_ST." there is no LATCH_ST in figure 15. Paragraph 48 should be corrected to read, "LTCH_ST." Appropriate correction is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action: A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United

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States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1-2, and 11 rejected under 35 U.S.C. 102(e) as being anticipated by Alisobhani (U.S. Patent 6760393)(hereafter referred to as Alisobhani).

As to claim 1, Alisobhani teaches a method of correlation, the method comprising the steps of: identifying a unique word, or feature, in an input data stream (column 11, line 65- column 12, line 5); storing a starting time associated with the identified feature relative to a boundary of the input data stream (column 12, lines 1-39); measuring a time interval until the identified feature is next repeated in the input data stream (column 12, lines 16-20), comparing the measured time interval to each of a set of valid interval values for the identified feature (column 12, lines 1-39); and calculating a difference between the stored starting time and a starting time associated with the identified feature relative to a boundary of a reference data sequence when the measured time interval matches one of the valid interval values (column 12, lines 23-35); wherein the calculated difference determines an amount that the input data stream must be time-shifted to achieve correlation with the reference data sequence (column 12, lines 23-35).

As to claim 2, Alisobhani teaches a method of correlation, the method comprising: a unique word, or feature, is comprised of sequences of cycle periods included in the input data stream (column 12, lines 15-25).

As to claim 11, Alisobhani teaches a method of correlation, the method comprising the steps of: searching for transitions of cycle periods in an input data stream including a number of subsections to determine a transition time for each of the subsections; identifying a unique word, or feature, in the input data stream (column 11, line 65- column 12, line 5); storing a starting time associated with the identified feature; calculating a first offset between the stored starting time and a nearest earlier determined transition time (column 12, lines 1-39); calculating a

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second offset between the nearest earlier determined transition time and a boundary of the input data stream (column 12, lines 23-39); comparing the calculated first offset with a set of valid offset values for the identified feature to identify the subsection in which the feature is located (column 12, lines 15-39); and subtracting the second offset from a known offset between a transition time for the identified subsection and a boundary of a reference data sequence; wherein the result of the subtraction determines an amount that the input data stream must be time-shifted to achieve correlation with the reference data sequence (column 12, lines 23-39).

Allowable Subject Matter

4. Claims 3-10 and 12-19 are objected to as being dependent upon a rejected base claims 1 and 11, respectively, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

5. Claims 20-30 are allowed.

6. As allowable subject matter has been indicated, applicant's reply must either comply with all formal requirements detailed in 2 and 4 above, or specifically traverse each requirement not complied with. See 37 CFR 1.111(b) and MPEP § 707.07(a).

7. The following is a statement of reasons for the indication of allowable subject matter:

Alisobhani et al. (U.S. Patent 6760393) (hereafter referred to as Alisobhani), teaches a correlation method. (Alisobhani, column 11, line 59-column 12, line 47). Alisobhani teaches a mobile station detects the occurrences

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of unique words, or features, transmitted from the base-station; measures the time interval between unique words from the base station; and adjusts its oscillator so that it can correctly predict the time interval between unique word detections. Alisobhani fails to teach comparing the measured time interval to each of a set of more than one valid interval values for the identified feature; detecting zero-crossings in the input data signal; comparing the first, second and third cycle periods to a set of expected cycle period sequences associated with the input data stream; and identifying a feature when all periods match in sequence one of the expected cycle period sequences; and a start state machine, end state machine, and feature interval state machine.

Petranovich teaches correlation of a preamble sequence, which contains repeated sequences, in a phase shift-keying system. (U.S. Patent 5610949) (hereafter referred to as Petranovich) (Petranovich, column, 17 line 35- column 18, line 28; figure 23). Petranovich teaches correlator 170 receives an input of binary data from data decoder 50 and the reference data sequence. Correlator 170 performs a symbol to symbol comparison of the symbol sequence of the decoded data to the symbols of the reference data sequence. A threshold comparator 172 compares the number of matching symbols to a predetermined threshold and defines a measure of correlation between the sequence and the reference data sequence. If the number of matches is greater than or equal to the threshold, then detect logic 174 will generate a detection signal. Petranovich fails to teach identifying a sequence, or feature, in the input data signal; measuring a time interval until the identified sequence is next repeated in the input data stream; comparing the measured time interval to each of a set of valid interval values for the identified feature to determine how much the input signal must be time-shifted to achieve correlation with the reference data sequence.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

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Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

i. U.S. Patent 5555247, Matsuoka et al.; Matsuoka teaches a method of correlation, comprising: comparing the phase of the correlation signal with that of a frame synchronizing signal (Matsuoka, column 10, lines 11-55).

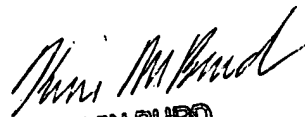
ii. U.S. Patent 6064695, Raphaeli; Raphaeli teaches a method of correlation of superchirps, comprising: each bit input to the correlator is multiplied by a corresponding bit from the template, and all 256 products are then summed. The sum output of the correlator is input to a maximum correlation detector 44. The maximum correlation detector outputs a shift index value upon detection of a maximum correlation sum (column 10, line 53- column 11, line 18).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Anika Talapatra whose telephone number is 571-272-6039. The examiner can normally be reached on Monday to Friday, 08:00-16:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mohammad Ghayour can be reached on 571-272-3021. The fax phone number for the organization where this application or proceeding is assigned is 703-872-93 06.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center at 866-217-9197 (toll-free).

A.T.


KEVIN BURD
PRIMARY EXAMINER